

Appendix J

MODEL ORDINANCE FOR THE DEFENSIBILITY OF SPACE AND STRUCTURES

ORDINANCE NO. _____

AN ORDINANCE OF THE (CITY/COUNTY) OF, _____, CALIFORNIA, ADOPTED PURSUANT TO THE STATE HEALTH AND SAFETY CODE, AMENDING THE LATEST ADOPTED EDITION OF THE UNIFORM BUILDING AND FIRE CODES TO REGULATE HAZARDOUS FIRE CONDITIONS IN THE VERY HIGH FIRE HAZARD SEVERITY ZONES DESIGNATED IN ACCORDANCE WITH THE CODE OF (CITY/COUNTY)

The (City Council/Board of Supervisors) of the (city/county) of _____ does ordain as follows:

SECTION 1. This Ordinance shall apply to all real property located within the (city/unincorporated area of the county) which is within the very high fire hazard severity zones designated pursuant to Section of the Code of (city/county).

SECTION 2. Definitions.

Accessory Building: Any building used as an accessory to residential, commercial, recreational, industrial, or educational purposes as defined in the latest adopted edition of the California Building Code, Group U, Division 1, Occupancy that requires a building permit.

Building: Any structure used or intended for supporting or sheltering any use or occupancy that is defined in the latest adopted edition of the California Building Code, except Group U, Division 1, Occupancy. For the purposes of this subchapter, building includes mobile homes and manufactured homes, churches and day care facilities.

Dead-End Road: A road that has only one point of vehicular ingress/egress, including cur-de-sacs and looped roads.

Defensible Space: The area within the perimeter of a parcel, development, neighborhood or community where basic wildland fire protection practices and measures are implemented, providing the key point of defense from an approaching wildfire or defense against encroaching wildfires or escaping structure fires. The perimeter as used herein is the area encompassing the parcel or parcels proposed for construction and/or development, excluding the physical structure itself. The area is characterized by the establishment and maintenance of emergency vehicle access, emergency water reserves, street names and building identification, and fuel modification measures.

Development: As defined in Section 66418.1 of the California Government Code.

Driveway: A vehicular access that serves no more than two buildings, with no more than 3 dwelling units on a single parcel, and any number of accessory buildings.

Dwelling Unit: Any building or portion thereof which contains living facilities, including provisions for sleeping, eating, cooking and/or sanitation for not more than one family.

Greenbelts: A facility or land-use, designed for a use other than fire protection, which will slow or resist the spread of a wildfire. Includes parking lots, irrigated or landscaped areas, golf courses, parks, playgrounds, maintained vineyards, orchards or annual crops that do not cure in the field.

Hammerhead/T: A roadway that provides a "T" shaped, three-point turnaround space for emergency equipment, being no narrower than the road that serves it.

Hydrant: A valved connection on a water supply/storage system, having at least one 2-1/2 inch outlet, with male American National Fire Hose Screw Threads (NH) used to supply fire apparatus and hoses with water.

Occupancy: The purpose for which a building, or part thereof, is used or intended to be used.

One-Way Road: A minimum of one traffic lane width designed for traffic flow in one direction only.

Roads, Streets, Private Lanes: Vehicular access to more than one parcel; access to any industrial or commercial occupancy, or vehicular access to a single parcel with more than two buildings or four or more dwelling units.

Roadway: Any surface designed, improved, or ordinarily used for vehicle travel.

Same Practical Effect: As used in this ordinance, means an exception or alternative with the capability of applying accepted fire suppression strategies and tactics, and provisions for firefighter safety, including:

- (a) access for emergency fire equipment,
- (b) safe civilian evacuation,
- (c) signing that avoids delays in emergency equipment response,
- (d) available and accessible water to effectively attack fire or defend a structure from fire, and
- (e) fuel modification sufficient for civilian and firefighter safety.

Structure: That which is built or constructed, an edifice or building of any kind or any piece of work artificially built up or composed of parts joined together in some definite manner.

Traffic Lane: The portion of a roadway that provides a single line of vehicle travel.

Turnaround: A roadway, unobstructed by parking, which allows for a safe opposite change of direction for emergency equipment. Design of such area may be a harnmerhead/T or terminus bulb.

Turnouts: A widening in a roadway to allow vehicles to pass.

Vertical Clearance: The minimum specified height of a bridge or overhead projection above the roadway.

SECTION 3. The Uniform Building Code (U.B.C.), (latest adopted edition) as published by the International Conference of Building Officials and the Uniform Fire Code (U.F.C.), (latest adopted edition) as published by the International Conference of Building Officials and Western Fire Chiefs Association, including the appendices thereto, as adopted pursuant to Section _____ of the _____ Code of (city/county), are hereby amended as follows:

I. Add the following, new sub-section to U.B.C. Section _____: Information on Plans and Specifications.

Fire Protection Information on Plans and Specifications in Very High Fire Hazard Severity Zones. In addition to all other relevant provisions of this code and the Uniform Fire Code, appendices and amendments thereto, a vicinity plan, scale no smaller than 1 inch equals 100 feet, shall be submitted to and approved by the fire department prior to the issuance of a grading permit or, if no grading permit is to be issued, prior the issuance of a building permit. The plan shall show the following:

1. All existing and proposed private and public streets on the proposed development property and within 300 feet of the property line of the proposed development, and so identified. with street width dimensions.
2. The location and identification of all existing and proposed fire hydrants within 300 feet of the property line of the proposed development. The water supply shall meet the fire flow requirements as set forth in the latest adopted edition of the U.F.C. and U.B.C., and amendments thereto.
3. The location, occupancy classification, and use of abutting properties.
4. Preliminary fuel modification plans for all improvements in areas containing combustible vegetation shall be submitted to and approved by the (authority having jurisdiction) concurrent with the submittal for approval of any tentative map. Final fuel modification plans shall be submitted to and approved by the (authority having

jurisdiction) prior to the issuance of a grading permit. The plans shall consider the criteria set forth in the Fuel Modification Plan Guidelines for Very High Fire Hazard Severity Zones.

II. Add the following new definition to U.B.C. Section _____: Definitions.

VERY HIGH FIRE HAZARD SEVERITY ZONE. Any geographic area designated pursuant to Government Code Section 51178 to contain the type and condition of vegetation, topography, weather, and structure density to increase the possibility of conflagration fires.

III. Add the following new sub-section to U.F.C. Section _____: Information on Plans and Specifications. Fire Protection Information on Plans and Specifications in Very High Fire Hazard Severity Zones.

In addition to all other relevant provisions of this code and the Uniform Building Code, appendices and amendments thereto, a vicinity plan, scale no smaller than 1 inch equals 100 feet, shall be submitted to and approved by the fire department prior to the issuance of a grading permit or, if no grading permit is to be issued, prior to the issuance of a building permit. The plan shall show the following:

1. All existing and proposed private and public streets on the proposed development property line within 300 feet of the property line of the proposed development, and so identified with street width dimensions.
2. The location and identification of all existing and proposed fire hydrants within 300 feet of the property line of the proposed development. The water supply shall meet the fire flow requirements as set forth in the latest adopted edition of U.F.C. and U.B.C., and amendments thereto.
3. The location, occupancy classification, and use of abutting properties. Preliminary fuel modification plans for all improvements in areas containing combustible vegetation shall be submitted to and approved by the (authority having jurisdiction) concurrent with the submittal for approval of any tentative map. Final fuel modification plans shall be submitted to and approved by the (authority having jurisdiction) prior to the issuance of a grading permit. The plans shall meet the criteria set forth in the Fuel Modification Plan Guidelines for Very High Fire Hazard Severity Zones.

IV. Add the following new definition to U.F.C. Section _____: Definitions.

VERY HIGH FIRE HAZARD SEVERITY ZONE. Any geographic area designated pursuant to Government Code Section 51178 to contain the type and condition of vegetation, topography, weather, and structure density to increase the possibility of conflagration fires.

V. Add the following paragraph to U.F.C. Section _____: Emergency Access.

Road and street networks, whether public or private, shall provide for safe access for emergency fire equipment and civilian evacuation concurrently, and shall provide unobstructed traffic circulation during a fire emergency consistent with Sections VI through XVI.

VI. Add the following paragraph to U.F.C. Section _____: Roadway Width.

All roads shall be constructed to provide a minimum of two nine-foot traffic lanes providing two-way traffic flow, unless other standards are provided in his ordinance or additional requirements are mandated by local jurisdictions or local subdivision requirements.

VII. Add the following paragraph to U.F.C. Section _____: Roadway Surface.

The surface shall provide unobstructed access to all vehicles, including sedans and fire engines. Surfaces should be established in conformance with local ordinances, and be capable of supporting at least a 40,000 pound load.

VIII. Add the following paragraph to U.F.C. Section _____: Roadway Grades.

The maximum grade for all roads, streets, private lanes and driveways shall not exceed 16 percent.

IX. Add the following paragraph to U.F.C. Section _____: Roadway Radius.

- (a) No roadway shall have a horizontal inside radius of curvature of less than 50 feet and additional surface width of 4 feet shall be added to curves of 50-100 feet radius; 2 feet to those from anything over 100 feet.
- (b) The length of vertical curves in roadways, exclusive of gutters, ditches, and drainage structures designed to hold or divert water, shall be not less than 100 feet.

X. Add the following paragraph to U.F.C. Section _____: Roadway Turnarounds.

Turnarounds are required on driveways and dead-end roads as specified in this article. The minimum turning radius for a turnaround shall be 40 feet from the center line of the road. If a hammerhead/T is used, the top of the "T" shall be a minimum of 60 feet in length.

XI. Add the following paragraph to U.F.C. Section _____: Roadway Turnouts.

Turnouts shall be a minimum of 10 feet wide and 30 feet long with a minimum 25 foot taper on each end.

XII. Add the following paragraph to U.F.C. Section _____: Roadway Structures.

(a) All driveway, road, street, and private land roadway structures shall be constructed to carry at least the maximum load and provide the minimum vertical clearance as required by Vehicle Code Sections 35550, 35750, and 35250.

(b) Appropriate signing, including but not limited to weight or vertical clearance limitations, one-way road or single lane conditions, shall reflect the capability of each bridge.

(c) A bridge with only one traffic lane may be authorized; however, it shall provide for unobstructed visibility from one end to the other and turnouts at both ends.

XIII. Add the following paragraph to U.F.C. Section _____: One-Way Roads.

All one-way roads shall be constructed to provide a minimum of one 10-foot traffic lane. All one-way roads shall connect to a two-lane roadway at both ends, and shall provide access to an area currently zoned for no more than 10 dwelling units. In no case shall it exceed 2640 feet in length. A turnout shall be placed and constructed at approximately the midpoint of each one-way road.

XIV. Add the following paragraph to U.F.C. Section _____: Dead-End Roads.

(a) The maximum length of a dead-end road, including all dead-end roads accessed from that dead-end road, shall not exceed the following cumulative lengths, regardless of the number of parcels served:

1. parcels zoned for less than one acre - 800 feet
2. parcels zoned for 1 acre to 4.99 acres - 1320 feet
3. parcels zoned for 5 acres to 19.99 acres - 2640 feet
4. parcels zoned for 20 acres or larger - 5280 feet

All lengths shall be measured from the edge of the roadway surface at the intersection that begins the road to the end of the road surface at its farthest point. Where a dead-end road crosses areas of differing zoned parcel sizes, requiring different length limits, the shortest allowable length shall apply.

(b) Where parcels are zoned 5 acres or larger, turnarounds shall be provided at a maximum of 1320 foot intervals.

(c) Each dead-end road shall have a turnaround constructed at its terminous.

XV. Add the following paragraph to U.F.C. Section _____: Driveways.

All driveways shall provide a minimum 10 foot traffic lane and unobstructed vertical clearance of 15 feet along its entire length.

(a) Driveways exceeding 150 feet in length, but less than 800 feet in length, shall provide a turnout near the midpoint of the driveway. Where the driveway exceeds 800 feet, turnouts be provided no more than 400 feet apart.

(b) A turnaround shall be provided at all building sites on driveways over 300 feet in length, and shall be within 50 feet of the building.

XVI. Add the following paragraph to U.F.C. Section _____: Gate Entrances.

(a) Gate entrances shall be at least two feet wider than the width of the traffic lane(s) serving that gate.

(b) All gates providing access from a road to a driveway shall be located at least 30 feet from the roadway and shall open to allow a vehicle to stop without obstructing traffic on that road.

(c) Where a one-way road with a single traffic lane provides access to a gated entrance, a 40 foot turning radius shall be used.

XVII. Add the following paragraph to U.F.C. Section _____: Size of Letters, Numbers and Symbols for Street and Road Signs.

Size of letters, numbers, and symbols for street and road signs shall be a minimum 3 inch letter height, 3/8 inch stroke, reflectorized, contrasting with the background color of the sign.

XVIII. Add the following paragraphs to U.F.C. Section _____: Visibility and Legibility of Street and Road Signs.

Street and road signs shall be visible and legible from both directions of vehicle travel for a distance of at least 100 feet.

XIX. Add the following paragraph to U.F.C. Section _____: Height of Street and Road Signs.

Height of street and road signs shall be uniform (county/city wide), and meet the visibility and legibility standards of this ordinance.

XX. Add the following paragraph to U.F.C. Section _____: Names and Numbers of Street and Road Signs.

Newly constructed or approved public and private roads and streets must be identified by a name or number through a consistent (county/city wide) system that provides for sequenced or patterned numbering and/or nonduplicative naming within each (county/city). All signs shall be mounted and oriented in a uniform manner. This section does not require any entity to rename or renumber existing roads or streets, nor shall a roadway providing access only to a single commercial or industrial occupancy require naming or numbering.

XXI. Add the following paragraph to U.F.C. Section _____: Intersecting Roads, Street, and Private Lanes.

Signs required by this ordinance identifying intersecting roads, streets and private lanes shall be placed at the intersection of those roads, streets, and/or private lanes.

XXII. Add the following paragraph to U.F.C. Section _____: Signs Identifying Traffic Access Limitations.

A sign identifying traffic access or flow limitations, including but not limited to weight or vertical clearance limitations, dead-end road, one-way road or single lane conditions, shall be placed: (a) at the intersection preceding the traffic access limitation, and (b) no more than 100 feet before such traffic access limitation.

XXIII. Add the following paragraph to U.F.C. Section _____: Installation of Road, Street, and Private Lane Signs.

Road, street and private lane signs required by this ordinance shall be installed prior to final acceptance of road improvements.

XIV. Add the following paragraph to U.F.C. Section _____: Addresses for Buildings.

All buildings shall be issued an address by the local jurisdiction which conforms to the jurisdiction's overall address system. Accessory buildings will not be required to have a separate address; however, each dwelling unit within a building shall be separately identified.

XXV. Add the following paragraph to U.F.C. Section _____: Size of Letters, Numbers, and Symbols for Addresses.

Size of letters, numbers and symbols for addresses shall be a minimum 3 inch letter height, 3/8 inch stroke, reflectorized, contrasting with the background color of the sign.

XXVI. Add the following paragraph to U.F.C. Section _____: Installation, Location, and Visibility of Addresses.

(a) All buildings shall have a permanently posted address, which shall be placed at each driveway entrance and visible from both directions of travel along the road. In all cases, the address shall be posted at the beginning of construction and shall be maintained thereafter, and the address shall be visible and legible from the road on which the address is located.

(b) Address signs along one-way roads shall be visible from both the intended direction of travel and the opposite direction.

(c) Where multiple addresses are required at a single driveway, they shall be mounted on a single post.

(d) Where a roadway provides access solely to a single commercial or industrial business. The address sign shall be placed at the nearest road intersection providing access to that site.

XXVII. Amend Section _____ of the U.F.C.: Enforcement.

When the (authority having jurisdiction) finds in any building or on any premises combustible, hazardous or explosive materials or dangerous accumulations of rubbish; or finds unnecessary accumulations of wastepaper, boxes, shavings or any highly flammable materials which are so situated as to endanger life or property; or finds obstructions to or on fire escapes, stairs, passageways, doors or windows that reasonably tend to interfere with the access and/or operations of the fire department or the egress of the occupants of such building or premises; or finds that this code is being violated, the is authorized to issue orders as (authority having jurisdiction) necessary for the enforcement of the fire prevention laws and ordinances governing the same and for the safeguarding of life and property from fire.

SECTION 4. Enforcement. For purposes of enforcement reference is made to amended Section 103.4.1.1 and Appendix VI-C of the 1994 edition of the Uniform Fire Code which is adopted per Section 3 of this document.

SECTION 5. Reduction of Fire Hazard. Any person who owns, leases, controls, operates, or maintains any dwelling or structure in, upon, or adjoining any mountainous area, forest-covered land, brush-covered land, grass-covered land, or any land that is covered with flammable material, which area or land is within a very high fire hazard severity zone shall at all times do all of the following:

(1) Firebreaks. Maintain around and adjacent to the building or structure a firebreak made by removing and clearing away, for a distance of not less than 30 feet on each side thereof or to the property line, whichever is nearer, all flammable vegetation or other combustible growth. This paragraph does not apply to single specimens of trees, ornamental shrubbery or similar plants that are used as groundcover, if they do not form a means of rapidly transmitting fire from the native growth to any building or structure.

(2) Additional Firebreaks. Maintain around and adjacent to any such building or structure additional fire protection or firebreaks made by removing all brush, flammable vegetation, or combustible growth which is located from 30 feet to 100 feet from any such building or structure or to the property line, whichever is nearer, as may be required by the Fire Chief if he/she finds that, because of extra hazardous condition, a firebreak of only 30 feet around the building or structure is not sufficient to provide reasonable fire safety. Grass and other vegetation located more than 30 feet from the building or structure and less than 18 inches in height above the ground may be maintained where necessary to stabilize the soil and prevent erosion.

(3) Trees. Remove that portion of any tree that extends within 10 feet of the outlet of any chimney or stovepipe.

(4) Dead or Dying Wood. Maintain any tree adjacent to or overhanging any building free of dead or dying wood.

(5) Vegetative Growth. Maintain the roof of any structure free of leaves, needles, or other dead vegetative growth.

(6) Chimney and Stovepipe. Provide and maintain at all times a screen over the outlet of every chimney or stovepipe that is attached to any fireplace, stove, or other device that burns any solid or liquid fuel. The screen shall be constructed of nonflammable material with openings of not more than one-half inch in size.

(7) Setback. All parcels 1 acre and larger shall provide a minimum 30 foot setback for buildings and accessory buildings from all property lines. For parcels less than 1 acre, jurisdictions shall provide for the same practical effect.

(8) Disposal of Flammable Vegetation and Fuels. Disposal, including chipping, burying, burning or removal to a landfill site approved by the local jurisdiction, of flammable vegetation and fuels caused by site development and construction, road and driveway construction, and fuel modification shall be completed prior to completion of road construction or final inspection of a building permits.

Greenbelts. Subdivisions and other developments, which propose greenbelts as a part of the development plan, shall locate said greenbelts strategically as a separation between wildland fuels and structures. The locations shall be approved by the (authority having jurisdiction).

A person is not required under this section to maintain a clearing on any land if that person does not have the legal right to maintain the clearing nor is any person required to enter upon property that is owned by any other person without the consent of the owner of the property.

SECTION _____ : Exceptions to Section 5. (a) Section 5 of this ordinance shall not apply to any land or water area acquired or managed for one or more of the following purposes or uses:

(1) Habitat for endangered or threatened species, or any species that is a candidate for listing as an endangered or threatened species by the state or federal government.

(2) Land kept in a predominantly natural state as habitat for wildlife, plant, or animal communities.

(3) Open space lands that are environmentally sensitive parklands.

(4) Other lands having scenic values and declared by the (City Council/Board of Supervisors) of the (city/county) of, or by state or federal law.

(a) This exemption applies whether the land or water area is held in fee title or any lesser interest. This exemption applies to any public agency, any private entity that has dedicated the land or water areas to one or more of those purposes or uses, or any combination of public agencies and private entities making that dedication.

(b) This section shall not be construed to prohibit the use of properly authorized prescribed burning to improve the biological function of land or to assist in the restoration of desired vegetation.

(c) In the event that any lands adjacent to any land or water area described in subdivision (a) are improved such that they are subject to Government Code Section 51182, the obligation to comply with Section 51182 shall be with the person owning, leasing, controlling, operating, or maintaining the occupied dwelling or occupied structure on the improved lands. All maintenance activities and other fire prevention measures required by Section 51182 shall be required only for the improved lands, not the land and water areas described in subdivision (a).

XXVIII. Amend Section _____ of the UBC: Building Standards.

Buildings and structures hereafter constructed, or relocated into Very High Fire Hazard Severity Zones shall, in addition to the requirements of the California Building Code and any other local ordinances, meet the following construction requirements.

(a) Eaves. Eaves shall be protected on the exposed underside by materials approved for one-hour-rated fire-resistive construction. Fascias are required and must be protected on the backside by materials approved for one-hour-rated fire-resistive construction or 2-inch (51 mm) nominal dimension lumber.

(b) Roofs. All new structures, and every existing structure where 50 percent or more of the total area of the existing building is re-roofed within any one year period within a very high fire hazard severity zone shall have at least a Class B roof.

(c) Underfloor Areas. Buildings or structures shall have all underfloor areas enclosed to the ground with exterior walls in accordance with Section (applicable UBC Section).

Exception: Complete enclosure may be omitted where the underside of all exposed floors and all exposed structural columns, beams and supporting walls are protected as required for exterior one-hour-rated fire-resistive construction.

(d) Unenclosed Accessory Structures. Unenclosed accessory structures attached to buildings with habitable spaces and projections, such as decks, shall be of one-hour-rated fire-resistive construction, or constructed with noncombustible materials.

Exception: When 100 feet of defensible space is provided, patio roofs may be constructed of combustible materials not less than 2x4 inch nominal size and arbors or open lattice work sunshades may be constructed of combustible materials not less than 2x2 inch nominal size.

(e) Underfloor Areas (Attached Structure). When the attached structure is located and constructed so that the structure or any portion thereof projects over a descending slope surface, the area below the structure shall have all underfloor areas enclosed to within 6 inches (152 mm) of the ground, with exterior walls in accordance with Section (applicable UBC Section).

(f) Windows. Exterior windows, window walls and skylights shall be tempered glass or multilayered glazed panels.

(g) Doors. Exterior doors, other than vehicular access doors to garages, shall be noncombustible or solid core not less than 1-3/4 inch (45 mm) thick. Windows within doors and glazed doors shall be in accordance with Section (applicable UBC Section).

(h) Attics. Attic ventilation openings, foundation or underfloor vents, or other ventilation openings, foundation or underfloor vents, or other ventilation openings in vertical exterior walls and vents through roofs shall not exceed 144 square inches (0.0929m²) each. Such vents shall be covered with noncombustible corrosion-resistant mesh with openings not to exceed 1/4 inch (6.4 mm).

Attic ventilation openings shall not be located in soffits, in eave overhangs, between rafters at eaves, or in other overhang areas. Gable end and dormer vents shall be located at least 10 feet (3048 mm) from property lines. Underfloor ventilation openings shall be located as close to grade as practical.

(i) Walls. Detached accessory structures located less than 50 feet (15,240 mm) from a building containing

habitable space shall have exterior walls constructed with materials approved for one-hour-rated fire-resistive construction or constructed with noncombustible materials on the exterior side.

(j) Underfloor Areas (Detached Structure). When the detached structure is located and constructed so that the structure or any portion thereof projects over a descending slope surface, the area below the structure shall have all underfloor areas enclosed to within 6 inches (152 mm) of the ground, with exterior walls in accordance with Section (applicable UBC Section)

SECTION_____. Findings. The provisions of this ordinance are reasonably necessary because of the following local climatic, geographical and topographical conditions:

(a) Very high fire hazard severity zones have been identified and adopted by local ordinance pursuant to Government Code Sections 51175 through 51178.

(b) The very high fire hazard severity zones are located in areas which are subject to periodic conditions of high velocity winds and high temperatures with accompanying low humidity.

(c) The climatic conditions described above are further accentuated by the topographical features of the hill and canyon areas, and the presence of highly combustible vegetation in the identified very high fire hazard severity zones.

(d) The conditions described above make these areas nearly inaccessible and operationally difficult for fire suppression and evacuation activities.

These findings are made pursuant to Sections 17958.5 and 17958.7 of the Health and Safety Code.